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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,026	03/26/2004	Peter R. Munguia	42P18957	8408

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EXAMINER	
RAY, GOPAL C	

ART UNIT	PAPER NUMBER
2111	

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05/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/810,026	MUNGUIA, PETER R.	
	Examiner	Art Unit	
	Gopal C. Ray	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,8,10-15,17,18 and 21-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,8,10-15,17,18 and 21-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/12/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Claims 1-5, 7, 8, 10-15, 17, 18 and 21-24 are presented for examination.

2. The Terminal Disclaimer filed on 4/12/07 is proper and made of record. The provisional rejection of Claims 1-5, 7, 8, 10-15, 17, 18 and 21-24 on the ground of nonstatutory obviousness-type double patenting is therefore withdrawn.

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 10-14 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6,185,692 granted to Wolford in view of US Patent 5,625,826 granted to Atkinson.

As per claim 1, the reference of Wolford teaches an apparatus comprising: A variable speed bus (Fig. 1, element 20) & col. 3, lines 6-19; a first unit coupled to the variable speed bus (Fig. 1); a second unit coupled to the variable speed bus (Fig. 1); and "an arbitration and a bus clock control unit" in col. 3, lines 6-19, 37-42; col. 4, lines 6-12, 34-41 and 62-66.

The reference of Wolford does not expressly show "change of clock frequency based on access request rate". However, the above feature was well known in the data processing art at the time the invention was made as evidenced by Atkinson. The reference of Atkinson teaches the feature in col. 8, lines 9-13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wolford in view of Atkinson to implement the above feature to obtain the

claimed invention because this is straightforward possibility known in the art from which one of ordinary skill in the art at the time the invention was made would select in accordance with circumstances without the exercise of inventive skill so as to allow the system of Wolford to be compatible with a widely used standard and to allow the system to take advantage of the many benefits provided by the feature such as improved performance as well as reducing power consumption of the system.

As per claim 2, the reference of Wolford teaches that the first unit is a processing unit (Fig. 1, CPU 12).

As per claim 3, the reference of Wolford teaches that the second unit is a video processing unit (Fig. 1, graphics 21).

As per claim 4, the reference of Wolford teaches that the first unit is a hard disk drive controller unit (Fig. 1, SCSI 18).

As per claim 10, the limitations of the claim are similar to claim 1. Therefore, the claim is rejected for similar reasons as discussed in the rejection of claim 1 above.

As per claim 11, the reference of Wolford teaches the added limitation of the claim in col. 3, lines 6-19, 37-42; col. 4, lines 6-12, 34-41 and 62-66.

As per claims 12-14, the claims are rejected for the same reasons as discussed in the rejection of claims 2-4 respectively.

As per claim 21, the claim is rejected for the same reasons as discussed in the rejection of claim 11.

5. Claims 22-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6,185,692 granted to Wolford in view of US Patent 5,625,826 granted to Atkinson, and further in view of US Patent Application Publication US 20050044442 (Barr et al.).

As per claims 22 and 24, the limitations of the claims are rejected for similar reasons as discussed in the rejection of claim 11 above with the exception of the added limitation, "change of clock frequency based on bandwidth requirement". However, one of ordinary skill in the art at the time the invention was made would have recognized that different types of devices might have different bandwidth requirements. The reference of Barr et al. teaches a system for adjusting a variable speed bus (PCI bus) depending on bandwidth requirements of the attached devices [para. 0053]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wolford and Barr et al. to obtain the claimed invention because they both teach a system for adjusting a variable speed bus.

As per claim 23, the reference of Wolford teaches the variable speed bus, the first unit, the second unit, the clock throttling logic and the arbitration and clock control unit are located on a single semiconductor die in Fig. 1.

6. Claims 5, 7, 8, 15, 17 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6,185,692 granted to Wolford in view of US Patent 5,625,826 granted to Atkinson, and further in view of common knowledge in the data processing art at the time of the invention.

As per dependent claims 5, 7 and 8, the claims are rejected for the same reasons as discussed in the rejection of claim 1 with the exception of claiming various alternatively useable units for isochronous data transfer. The examiner takes Official Notice that the claimed features were well known in the data processing art at the time the invention was made. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Wolford in view of Atkinson to implement the above features to obtain the claimed invention because these are straightforward possibilities from which one of ordinary skill in the art at the time the

invention was made would select in accordance with circumstances without the exercise of inventive skill so as to allow the system of Wolford in view of Atkinson to be compatible with a widely used standard and to allow the system to take advantage of the many benefits provided by those features.

As per claims 15, 17 and 18, the claims are rejected for the same reasons as discussed in the rejection of claims 5, 7 and 8 respectively.

7. Applicant's arguments filed on 4/12/07 have been fully considered but are moot in view of the new grounds of rejection. Furthermore, applicant argues that the cited prior art does not teach, "change of clock frequency based on access request rate". However, the above feature was well known in the data processing art at the time the invention was made as evidenced by Atkinson. The reference of Atkinson teaches the feature in col. 8, lines 9-13.

The examiner wants to point out that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. If applicants are aware of any prior art better than those are of record, they are required to bring the prior art to the attention of the examiner. Applicants are also reminded that each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in 37 CFR 1.56. Applicants are advised to submit any information material to patentability in accordance with 37 CFR 1.97 and 1.98.

10. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Furthermore, all claims should be revised carefully to eliminate all grammatical errors and antecedent basis problems.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gopal C. Ray whose telephone number is (571) 272-3631. The examiner can normally be reached on Monday - Friday from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart, can be reached on (571) 272-3632. The fax phone number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**mark.rinehart@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC central telephone number is (571) 272-2100. Moreover, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lastly, paper copies of cited U.S. Patents and Patent Application Publications ceased to be mailed to applicants with office actions as of June 2004. Paper copies of Foreign Patents and Non-Patent Literature will continue to be included with office actions. These cited U.S. Patents and Patent Application Publications are available for download via Office's PAIR. As an alternate source, all U.S. Patents and Patent Application Publications are available on the USPTO web site (www.uspto.gov), from

the office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at http://www.uspto.gov/ebc/index.html or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. Patent or Patent Application Publications will not be granted.

Gopal C. Ray

GOPAL C. RAY
PRIMARY EXAMINER
GROUP 2100